



City of San Diego

*Environmental Services Department*

# *Energy and Municipal Operations*

Presentation to City of San Jose

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# City of San Diego

- Population: 1,311,162
- Land Area: 342 square miles
- 265,000,000 kWh consumed annually in 1,400 municipal facilities
- San Diego generates 50% of its electricity via landfill/digester gases, solar systems, and hydroelectric units and sells 25% to local utility.



# What can a City Do?

- Identify How, When, and Where energy used in municipal facilities.
- Establish sustainable building policies for long term improvement.
- Leverage capital costs: CEC loans, Utility Partnerships, and Power Purchase Agreements.
- Support and participate in legislation.



# Power Purchase Agreement (PPA)

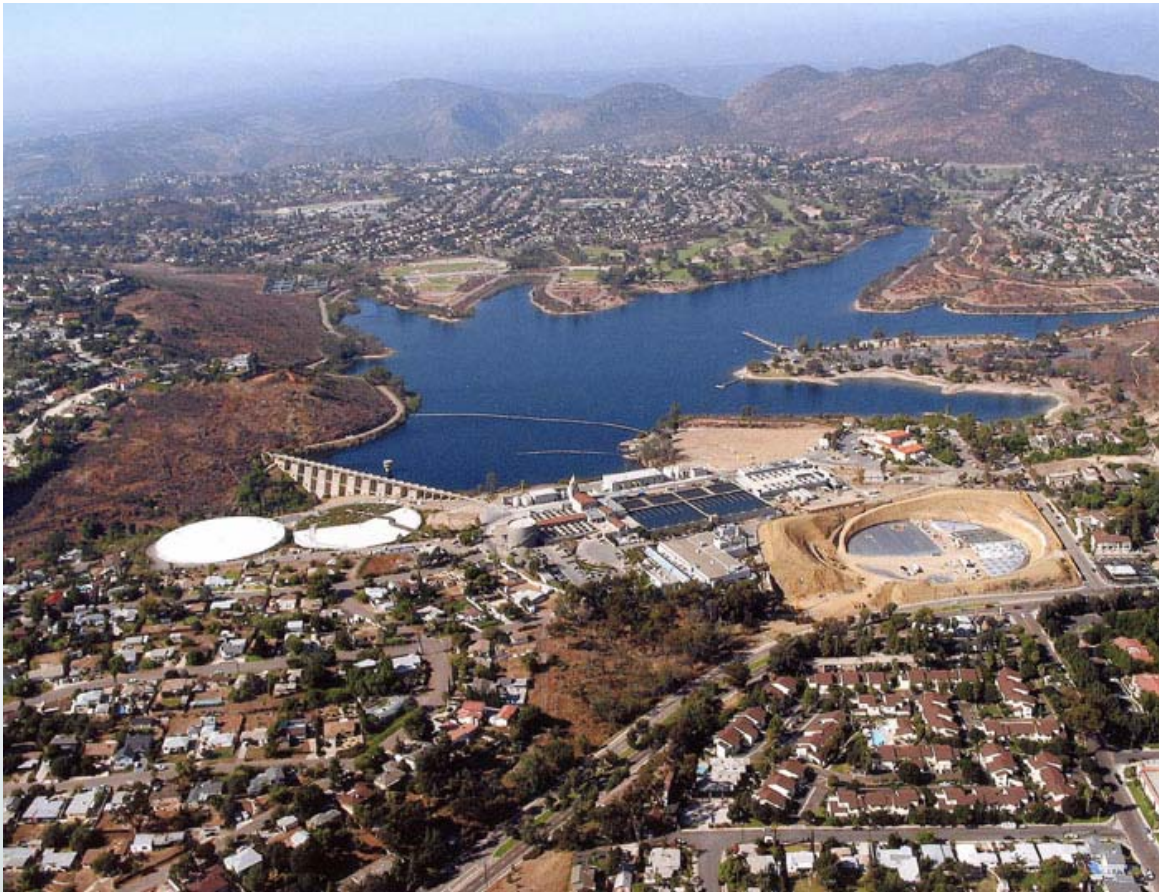
- Developer designs, constructs, owns, operates and maintains solar system
- City provides site license and purchases all power produced
- Energy at fixed cost with Escalator and Degradation Factor
- Renewable Energy Credits Remain with Facility Owner
- Twenty year term



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# Power Purchase Agreement



Solar  
Panels  
on Water  
Tank  
Tops





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## Alvarado Solar



**1.4 Million kWh Annually**



# CEC Loans

- \$40M available for energy efficiency projects
- Application maximum \$3M
- Simple Payback 9.8 years
- Interest rate 4.5%
- No liens – Requires Promissory Note
- Repayment over 15 years with savings from energy projects
- Improvements only in municipal owned/occupied facilities (no leased space)



# Utility Partnerships

- Incentives and Rebates
- Technical Training
- Community Outreach
- Utility owned Solar Panel installation at R.H. Fleet Space Center in Balboa Park to relieve transmission congestion







# Sustainable Building Policy

- City of San Diego new facilities and major remodels designed to LEED “Silver”
- Expedited permit process
  - Self generation with renewable energy
  - Exceed Title 24 energy requirements

